

## DESK DRAWER USER INTERFACE

Continuation of prior application Ser. No. 08/780,626 filed Jan. 8, 1997 now U.S. Pat. No. 5,825,348, which is a continuation of Ser. No. 08/480,969 filed Jun. 7, 1995 now U.S. Pat. No. 5,657,049, which is a continuation of Ser. No. 08/090,470 filed Jul. 12, 1993, now abandoned which is a continuation of Ser. No. 07/709,715 filed Jun. 3, 1991, now abandoned.

### BACKGROUND OF THE INVENTION

#### 1. Field of the Invention

The present invention relates to a computer controlled software user interface system within an information management system. Specifically, the present invention relates to user interface systems that create and provide ready access to a secondary display region in addition to the primary display region on a two-dimensional computer data display screen. The secondary display region contains and provides varied access to sources of information.

#### 2. Prior Art

Information management systems, such as those which are used or can be adapted for use in computer systems, are placing increasing demands on the physical resources available for displaying information to the user. There exists a need to compartmentalize and categorize specific segments of information in order to effectuate its retrieval and management. Therefore, information management systems utilize specially developed screen displays that incorporate individual display images as well as display information formats in order to allow the user to effectively gain access to the information system. Therefore, a particular screen display can be thought of as having both display "tools" and display "information." The display tools give the user special ability to organize and manage information while the display information constitutes either the resultant data desired or the application program the user desires to operate.

The current art in the field of computer display information management technology utilizes rectangular sections of screen display area to manage the computer information. Prior art known systems include the Finder™ user interface of the Apple Macintosh™ computer which is manufactured by Apple Computer, Inc. of Cupertino, Calif. The Finder™ information management system (also referred to as "Finder™ user interface" or just "Finder™") is based on display principles using "windows" and "icons" to help manage computer information. The main or root window is called the "desktop" area, or more generally the primary display region. The desktop, or primary display region, is always open (displayed on the screen with its contents accessible or at least partially accessible), and takes up substantially the full display screen area when other windows are not open. The desktop is usually visible in the background when other windows are open.

Existing inside any particular window, including the desktop itself, other windows containing separate information or windows may contain information identifiers called "icons." An icon is a particular screen identifier for a particular collection of computer information; typically an icon may represent a "file" which is either a collection of data or a program or program segment. An icon also may represent the closed state of a window. Icons are graphic images displayed on the computer screen and usually correspond to the type of information stored within the file. Icons give the user access to the particular file represented by the graphic

image when the icon is visible. The use of icons and windows is well known in the art.

The "file" is the information packet that the user wishes to utilize, create or modify; each particular file has an associated name identifying the file. Therefore, any given file may be located in the information management system by knowing a file name, an icon graphic representation associated with the name, or a window locator name. All information (files) situated within a particular window are identified with that particular window's own identification location within the computer information management system. Therefore, any particular file information can be retrieved knowing its particular identification name and its window name. Accordingly, the resulting screen display utilizing the Finder™ management system may be broken down into multiple windows and graphic icons.

Another important element of the prior art information management system is a screen cursor. The cursor, or cursor means, allows direct user control over the management system as described above. The Finder™ system is complemented with a "mouse" and a corresponding "pointer" which makes up the cursor means. The user has control over the mouse, which is a mechanical-electrical means that translates two-dimensional mouse movement into a two-dimensional screen position movement represented by an animated pointer or arrowhead. The user contacts and directs the mouse. When the mouse is moved freely on a table top then the pointer on the screen will move animated in a similar and proportional manner. The mouse also contains one or more push buttons which can be used to effectuate control over the cursor pointer by selecting or deselecting specific icons or other display tools. It is said that the cursor pointer is "activated" when the mouse button is depressed and the pointer remains active until the button is released. Pointer activation may also be initiated by sequences of mouse button presses, such as a "double click" or rapid button press twice in sequence. In the current art, certain screen window locations are sensitive and react to the cursor pointer position without activation and are often called "hot spots" or "active." When the cursor is first activated while on an deselected icon that icon becomes "selected;" and if the cursor is activated again (as in double click) then the icon is said to be "activated."

Access to information in a prior art user interface system for a display management system is therefore based on windows, icons and pointer movement of the cursor. Therefore, it is fundamental that before information may be accessed it must be displayed on the screen by an icon, name or similar representational image. This is the case because in a display screen management system the icon may not be accessed unless it is currently displayed on the screen in some form. To access a file, the cursor pointer is placed on the visible icon or visible file name and the pointer is activated. A closed window may be represented by an icon or a window name. A window opens when the pointer of the cursor rests on the visible icon or visible name representing the closed state of the window and the pointer is activated. Within the open window, files may be displayed by icon or by name. An open window, of various geometries, may be rectangular and will exist within the display area of the main viewing screen on the desktop. Multiple windows may be open at one time, typically with the most foreground window corresponding to the most recently opened window and the background windows representing those opened previously. In the organization scheme described, it is appreciated that files are nested within windows and windows can be nested within other windows; the main or root window being the desktop area, or primary display region.